

VODAFONE NEW ZEALAND LIMITED

**STANDARD TERMS PROPOSAL FOR
MOBILE CO-LOCATION**



vodafone

28 APRIL 2008

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1. BACKGROUND

1. On 16 November 2006, the Commerce Commission (**Commission**) formally commenced an investigation into whether or not to amend the terms of the current mobile co-location service under Schedule 3 of the Telecommunications Act 2001 (**Act**).
2. On 19 January 2007, Vodafone submitted an application for an undertaking and, following consultation, submitted an amended undertaking for the mobile co-location service (**Mobile Co-location Service**) on 22 May 2007.
3. On 3 August 2007, the Commission issued a draft report rejecting Vodafone's amended undertaking and recommending that the Mobile Co-location Service remain a specified service. In that report, the Commission considered that it was appropriate for changes to be made to the Telecommunications Carriers' Forum (**TCF**), "Code for Co-location of Radiocommunications Services Regulated under the Telecommunications Act 2001" (**Code**), approved by the Commission on 7 December 2006, to address certain unresolved issues.
4. On 2 November 2007, Vodafone submitted a further amended undertaking. On 14 December 2007, the Commission initiated a standard terms determination process under section 30C of the Act in respect of the Mobile Co-location Service. On 10 January 2008, the Commission gave public notice under section 30D of the Act that it had initiated the standard terms determination process. On 31 January 2008, the Commission conducted a scoping workshop under section 30E of the Act.
5. On 8 February 2008, the Commission gave written notice to Vodafone pursuant to section 30F of the Act requiring that Vodafone, as an Access Provider, submit to the Commission a standard terms proposal (**STP**) for the Mobile Co-location Service that complies with section 30G of the Act (**Notice**). The Notice required that the STP be submitted to the Commission no later than 5.00 pm on Monday, 28 April 2008.

2. THE STP

6. Vodafone encloses its STP in relation to the Mobile Co-location Service. The STP comprises the following documents:

- (a) Mobile Co-location General Terms;
- (b) Mobile Co-location Service Description;
- (c) Mobile Co-location Service Level Terms (**SLA**);
- (d) Mobile Co-location Operations Manual;
- (e) Mobile Co-location Access Terms;
- (f) Mobile Co-location Interference Management and Design; and
- (g) Mobile Co-location Implementation Plan.

3. COMPLIANCE WITH THE ACT

7. The Notice states that the STP must comply with section 30G of the Act and the additional requirements specified by the Commission.¹ Section 30G of the Act requires that an STP must:
- (a) specify sufficient terms to allow, without the need for the access seeker to enter into an agreement with the access provider, the designated access service or specified service to be made available within the time frames specified under paragraph 7(c) below;
 - (b) provide an explanation of, and reasons for, those terms;
 - (c) state the time frames within which the access provider must make the service available to –
 - (i) every person who is already an access seeker when the standard terms determination is made; and
 - (ii) every person who becomes an access seeker after the standard terms determination is made;
 - (d) be consistent with the description of service in Part 2 or Part 3 of Schedule 1, as the case may be;
 - (e) be consistent with the applicable access principles and any limits on those principles; and
 - (f) comply with any additional requirements that the Commission has specified under section 30F(2).
8. Section 30G of the Act further requires that the terms referred to in paragraph 7 above must:
- (i) include the price payable for the supply of the service if that price has been determined in accordance with the applicable initial pricing principle or the

¹ Paragraph 10 of the Notice.

applicable final pricing principle in a previous determination made under section 27; or

(ii) must not include that price if that is not the case.

9. Vodafone considers that this STP complies with the requirements set out in paragraphs 7 and 8 above. In particular:
- (a) no further agreement is required as between the Access Seeker and the Access Provider in order for the Mobile Co-location Service to be made available. A certain amount of co-ordination, discussion and co-operation will be required between the parties in order for the Mobile Co-location Service to be made available. However, no further agreement will be required relating to the non-price terms of the Mobile Co-location Service;
 - (b) Vodafone has not provided an explanation for every non-price term which makes up this STP (and does not believe that it is practical or necessary to do so). However, it has provided explanations and grounds to support key terms where it believes this will be of interest and benefit to the Commission and other parties in the industry. Vodafone is willing to provide further information to the Commission in this regard where the Commission believes it would be of assistance to it;
 - (c) the time frames within which the Access Provider will make available the Mobile Co-location Service are set out in the Mobile Co-location Operations Manual and Implementation Plan;
 - (d) the definition of the Mobile Co-location Service in the Mobile Co-location Service Description comports with the Act's requirements;
 - (e) the documents which make up the STP are consistent with the applicable access principles and the limits on those principles;
 - (f) the STP complies with the Commission's additional requirements specified under section 30F(2) of the Act; and
 - (g) Vodafone has not included the price payable for the supply of the Mobile Co-location Service since the price has not been determined in accordance with the applicable initial pricing principle or the applicable final pricing principle in a previous determination.

4. COMPLIANCE WITH THE NOTICE

10. In its Notice, the Commission imposes several additional requirements under section 30F(2) of the Act.² Vodafone considers that this STP complies with those additional requirements in the following ways:

- (a) The Commission requires that the STP must, where practicable, take account of the style, form and content of existing standard term determinations. Vodafone has accordingly used, as the basis for this STP, the Unbundled Copper Local Loop Network Co-location final Standard Terms Determination dated 7 November 2007 (**UCLL Co-location STD**). This is more fully detailed in Part 5 below. The UCLL Co-location STD has been amended to meet the requirements of the Act, the Notice and the Mobile Co-location Service;
- (b) The Commission requires that the STP must include all non-price terms of supply that have been unanimously agreed by the relevant TCF working parties between the date of the receipt of the Notice and the date of receipt by the Commission of the STP. This STP takes into account such non-price terms of supply, as is more fully detailed in Part 6 below;
- (c) The Commission requires that the STP must include all of the terms required to provide relevant facilities for, and the installation and maintenance of, an access seeker's equipment, including the access seeker's rights and obligations when accessing co-location sites. This STP includes such terms;
- (d) The Commission requires that the STP must include general terms that include terms concerning dispute resolution procedures; the consequences of a breach of the determination; suspension and termination, and procedures for, or restrictions on, assignment of the Mobile Co-location Service. This STP includes such terms, as is more fully detailed in Part 7; and
- (e) The Commission requires that the STP include the following items:
 - (i) Service Description;
 - (ii) Operations Manual;

² Paragraph 12 of the Notice.

(iii) SLA;

(iv) Implementation Plan; and

(v) Terms relating to interference management,

and outlines in further detail what each of those sections should include. This STP includes the above items (as detailed in Parts 9 – 14 below), and complies with the Commission's detailed requirements in relation to each.

5. REQUIREMENT TO TAKE INTO ACCOUNT EXISTING STDs

11. The Commission requires that the STP must, where practicable, take account of the style, form and content of existing standard terms determinations (**STD**).³ Vodafone has accordingly used, as the basis for this STP, the UCLL Co-location STD.
12. Vodafone believes that the UCLL Co-location STD is an appropriate starting point for this STP for the following reasons:
- (a) the UCLL Co-location STD involves a service which has similarities to the Mobile Co-location Service;
 - (b) the UCLL Co-location STD is familiar to the telecommunications industry;
 - (c) the UCLL Co-location STD contains a set of legal, technical and operational terms which have been the subject of comment by many parties within the telecommunications industry, and which have been determined by the Commission; and
 - (d) parties at the “Mobile Co-location Service Scoping Workshop” held on 31 January 2008 (**Workshop**) represented that they would favour the use of previous STDs as a starting point.
13. Vodafone has amended the UCLL Co-location STD so as to ensure that the STP complies with the Act, the Notice and is suitable for the Mobile Co-location Service.

³ Paragraph 12(a) of the Notice.

6. REQUIREMENT TO INCLUDE TERMS UNANIMOUSLY AGREED BY THE TCF

14. The Commission requires that the STP include all non-price terms of supply that have been unanimously agreed by the relevant TCF working parties between the date of the receipt of the Notice and the date of the receipt by the Commission of the STP.⁴

15. In March 2008, Vodafone participated in the TCF “Mobile Co-location Working Party”. On 28 March 2008, a paper entitled “Recommendations for Final Agreement at the Mobile Co-location Working Party Meeting on 28 March 2008” was approved and was subsequently submitted to, and approved by, the TCF Board. That paper is attached at Appendix 2 and comprises the following sections:

- (a) Definitions for the Mobile Co-location Service;
- (b) Service Description for the Mobile Co-location Service;
- (c) General Terms Principles;
- (d) Interference Management and Design Principles; and
- (e) Operations Manual Principles.

16. Vodafone has included in its STP those terms that have been unanimously agreed by the TCF Mobile Co-location Working Party. Where the unanimous terms are in the form of principles rather than detailed provisions, Vodafone has reflected those principles in its drafting, to the extent that they are consistent with the agreed principles.

17. Vodafone therefore believes that it has met this requirement.

Use of the Code

18. On 5 October 2004, the TCF submitted its draft code for co-location of radio-communications services for approval by the Commission. On 20 June 2005, the Commission rejected the draft code and on 22 September 2006, the TCF re-submitted its draft code, attaching the Master Co-location Agreement. On

⁴ Paragraph 12(b) of the Notice.

7 December 2006, the Commission approved the draft code for co-location.

19. Vodafone notes that the Code provides a framework, in the form of principles and processes, which is consistent with the purposes and provisions of the Act. Vodafone has used various provisions and principles found in the Code in the STP, where appropriate, and where consistent with those terms that have been unanimously agreed by the TCF.

7. MOBILE CO-LOCATION GENERAL TERMS REQUIRED BY THE NOTICE

20. In its Notice, the Commission states that Vodafone's STP:

"must include general terms that include terms concerning all of the following matters:

- i. dispute resolution procedures;
- ii. the consequences of a breach of the determination (including provision for set-off or withholding rights, or liquidated damages);
- iii. suspension and termination of the Mobile Co-location Service, including terms that address the rights of an access seeker or an access provider to terminate access to a particular co-location site or relevant facility; and
- iv. procedures for, or restrictions on, assignment of the Mobile Co-location Service."⁵

21. The Notice also states that Vodafone's STP:

"must include all of the terms required to provide relevant facilities for, and the installation and maintenance of, an access seeker's equipment, including the access seeker's rights and obligations when accessing co-location sites".⁶

22. Vodafone's Notice includes such terms, as is detailed below.

USE OF THE UCLL CO-LOCATION GENERAL TERMS

23. In developing the Mobile Co-location General Terms, Vodafone has used the UCLL Co-location General Terms as a starting point. It believes this is appropriate because:

- (a) the UCLL Co-location STD involves a service which has similarities to the Mobile Co-location Service;
- (b) the UCLL Co-location General Terms are familiar to many parties within the

⁵ Paragraph 12(d) of the Notice.

⁶ Paragraph 12(c) of the Notice.

telecommunications industry;

- (c) the UCLL Co-location General Terms contain a set of legal terms which have been the subject of comment by many parties within the telecommunications industry, and which have been determined by the Commission;
- (d) parties at the Workshop expressed views that they would favour the use of previous STDs as a starting point; and
- (e) The TCF paper entitled “Recommendations for Final Agreement at the Mobile Co-location Working Party Meeting on 28 March 2008” reflects the unanimous agreement of the parties that the UCLL Co-location General terms, amended as appropriate, would be used as the base document for the Mobile Co-location Service.⁷

24. For convenience, Vodafone has included in this STP a clean version of the Mobile Co-location General Terms, as well as a version which shows changes to the General Terms contained in the UCLL Co-location STD. The following table is a high level summary and explanation of the key changes made to the General Terms contained in the UCLL Co-location STD:

Key change to General Terms in UCLL Co-location STD	Reason
Definitions (clause 1)	New definitions have been added which relate specifically to the Mobile Co-location Service. In particular, new terms have been defined where these terms are used (but not defined) in the Act.
Reference to Charges (clauses 7.2 and 14.5)	In order to comply with the requirement in section 30G of the Act that the STP not include price, Vodafone has removed all references to a price list. The mechanism for Charges has, however, been retained, so that this can be used by the parties for whatever

⁷ Page 11 of TCF paper entitled “Recommendations for Final Agreement at the Mobile Co-location Working Party Meeting on 28 March 2008”.

	Charges they agree. There is a requirement for parties to agree the Charges prior to the Mobile Co-location Service being made available. These provisions reflect the principles agreed by the TCF. ⁸
Insurance requirements (clause 7.7)	The insurance requirements have been amended to reflect the increased liability limits in relation to co-location at Exchanges (which is a defined term). The TCF agreed that the insurance figures would correlate to the liability caps. ⁹
Change Mechanism for the Mobile Co-location Operations Manual and Service Level Terms (clause 10)	Refer to Part 11 of this submission.
Access Seeker and Access Provider liability (clauses 19 and 20)	Refer to Part 8 of this submission.
Unplanned Outages (clause 23.8)	New provisions have been added in order to address the need for any emergency work which an Access Provider is required to take on or around a Relevant Facility. The provisions are based on those contained in the ACCC Code.
Cabinetisation	The provisions in relation to Cabinetisation (which formed 38.9 to 38.15 of the UCLL Co-location General Terms) have been removed since they are not relevant for the Mobile Co-location Service.
Health and Safety (clause 40)	New provisions in relation to health and safety obligations have been included to provide for the additional health and safety

⁸ Page 11 of TCF paper titled "Recommendations for Final Agreement at the Mobile Co-location Working Party Meeting on 28 March 2008".

⁹ Page 11 of TCF paper titled "Recommendations for Final Agreement at the Mobile Co-location Working Party Meeting on 28 March 2008".

	<p>issues which arise in relation to the Mobile Co-location Service. The provisions are based on those contained in the ACCC Code.</p>
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Dispute Resolution Procedures

25. The dispute resolution procedures are set out in clause 39 of the Mobile Co-location General Terms. These provisions track the dispute resolution clauses contained in the UCLL Co-location STD.
26. The dispute resolution process is initiated by a party giving to the other a notice of dispute. The parties then enter into a negotiation phase in order to attempt to resolve the dispute. In the event of a deadlock, the dispute is referred to mediation (by agreement), to an expert (by agreement), or to arbitration. The parties have obligations to advise the Commission at certain stages in the dispute resolution process.

Consequences of breach of the STD

27. The Mobile Co-location General Terms must contain provisions relating to the consequences of a breach of the determination (including provision for set-off or withholding rights, or liquidated damages).
28. The STP sets out different types of breaches and the remedies for each.
29. Clauses 36, 37 and 38 of the Mobile Co-location General Terms set out the provisions governing the circumstances when a party is in breach of an obligation of the Mobile Co-location General Terms, and the consequences of such breach. In the event of a party's default (which is a defined term), the other party may give notice requiring that party to remedy the default within a reasonable period, which must be at least 15 Working Days.
30. The consequences of the failure by a party to remedy a default differ depending on whether a dispute notice has been served, and in certain circumstances give rise to suspension and termination rights.
31. Each party's liability in respect of a default which causes loss is limited and excluded in certain ways, as provided in clauses 19 and 20.
32. In the event that the Access Seeker does not pay an invoice before the due date,

clauses 15 and 16 state that this will constitute a default and the Access Provider may give notice to the Access Seeker and charge the Access Seeker interest on the unpaid amount (and may suspend the Mobile Co-location Service in the event the non-payment is not remedied within 20 Working Days of the notice). Provisions dealing with invoice disputes are set out in clauses 17 and 18. Clause 15 excludes the general right for the Access Seeker to set-off or withhold, subject to certain exceptions.

33. In addition, the Mobile Co-location Service Level Terms set out a number of service levels with which the Access Provider must comply, and set out a performance penalty regime which applies in the event that the Access Provider defaults in relation to those service levels. This is explained in greater detail in Part 10 below.

Suspension of the Mobile Co-location Service

34. The STP sets out the circumstances under which the Access Provider is able to suspend the Mobile Co-location Service, and the processes which must first be followed. The Access Provider must inform the Commission of any suspension, including the reason for the suspension.

35. The Access Provider has the right to suspend all or part of the Mobile Co-location Service (either immediately or within a reasonable period) in the following instances, which are set out in detail in the Mobile Co-location General Terms:¹⁰

- (a) the Access Seeker endangers the health or safety of any person;
- (b) the financial security pre-requisites are not satisfied;
- (c) any condition specified by the Access Provider to recommence the Mobile Co-location Service is not met;
- (d) fraudulent use of the Mobile Co-location Service;
- (e) interference with the Access Provider's network; or
- (f) certain insolvency-type events relating to the Access Seeker.

36. The Access Provider may suspend supply of the Mobile Co-location Service if the

¹⁰ Clause 37 of the Mobile Co-location General Terms.

Access Seeker has not paid any amount which is overdue within 20 Working Days of the non-payment notice being given by the Access Provider.¹¹

37. The Access Provider may also suspend supply of the Mobile Co-location Service for the purposes of conducting planned and unplanned outages (which are defined terms), subject to certain restrictions.¹²

38. Additionally, the Access Provider may suspend supply of the Mobile Co-location Service following consultation and the serving of a default notice for a material default, if the default has not been remedied.¹³

39. The Access Provider has certain other rights to suspend supply of the Mobile Co-location Service (but only to the minimum extent practicable) relating to the failure of the Access Seeker to hold a licence; breach of the Privacy Act 1993; and the exercise of a statutory function of the Privacy Commissioner.¹⁴

Termination of the Mobile Co-location Service

40. The Access Seeker may terminate all or part of the Mobile Co-location Service by providing not less than two month's written notice. The Access Seeker may also terminate the Mobile Co-location Service in the event that the Access Provider has not remedied a default within a specified period of time.¹⁵

41. Subject to certain restrictions, the Access Provider may terminate the Mobile Co-location Service in certain insolvency-type events relating to the Access Seeker; in the event that five or more default notices have been served over 12 months; and in the event that the Access Seeker has not remedied a default.¹⁶

42. The Access Provider must inform the Commission of any termination, including the reason for the termination.

Assignment

43. The Access Seeker may transfer all its rights and obligations, provided the assignee

¹¹ Clause 16 of the Mobile Co-location General Terms.

¹² Clause 23 of the Mobile Co-location General Terms.

¹³ Clause 37 of the Mobile Co-location General Terms.

¹⁴ Clause 37 of the Mobile Co-location General Terms.

¹⁵ Clause 38 of the Mobile Co-location General Terms.

¹⁶ Clause 38 of the Mobile Co-location General Terms.

meets the prerequisites relating to financial security requirements, and provided the Access Seeker provides prior notice to the Access Provider of when the assignment will take effect.¹⁷

¹⁷ Clause 42 of the Mobile Co-location General Terms.

8. OTHER KEY MOBILE CO-LOCATION GENERAL TERMS

44. Vodafone believes it is important to provide additional explanation in relation to a small number of other key terms contained in the Mobile Co-location General Terms, namely:

- (a) the change mechanism in relation to the Mobile Co-location Operations Manual and Service Level Terms; and
- (b) liability.

45. Vodafone's additional explanation with respect to the change mechanism is contained in Part 11 of this submission. Its explanation with respect to liability is set out below.

Liability

46. In drafting the liability provisions of the Mobile Co-location General Terms, Vodafone has considered:

- (a) the liability provisions contained in previous STDs, including the UCLL Co-location STD;
- (b) the liability provisions contained in the Code;
- (c) the TCF paper entitled "Recommendations for Final Agreement at the Mobile Co-location Working Party Meeting on 28 March 2008" which contains unanimous agreement on certain points relating to liability, including reference to the Mobile Co-location Code;¹⁸ and
- (d) the risks associated with the provision and receipt of the Mobile Co-location Service, and the ability of each party to manage or control such risks.

47. Vodafone believes that the best way to establish liability arrangements is to place the relevant risk(s) on the party which is in the best position to manage or control that risk. Vodafone believes that the liability provisions reflect the risk profile associated with the provision and receipt of the Mobile Co-location Service, and further believes

¹⁸ Page 11 of TCF paper titled "Recommendations for Final Agreement at the Mobile Co-location Working Party Meeting on 28 March 2008".

that the provisions are reasonable for both the Access Provider and Access Seeker.

48. Vodafone has determined that the risks associated with co-location in exchanges for the purposes of providing UCLL co-location are similar to those associated with mobile co-location. In particular, there is a risk that employees or contractors of either party may damage the other party's equipment, including the mast or pole infrastructure belonging to the Access Provider, or the exchange of an Access Provider in the event that the Mobile Co-location Service is being provided at an exchange.

49. The liability provisions proposed in this submission can be summarised as follows:

- (a) neither party is liable for defaults caused by events beyond its reasonable control;¹⁹
- (b) subject to certain exceptions, each party's total liability is limited to \$1,000,000 for a single event and \$10,000,000 in aggregate for all events in any 12-month period. No party will be liable for indirect damages (which is a defined term),²⁰
- (c) where the Mobile Co-location Service is provided to an Access Seeker at an exchange (which is a defined term), and where the liability relates to that exchange, the Access Seeker's total liability in aggregate for all events in any 12-month period is limited to \$50,000,000. This greater amount is intended to reflect the increased risk of potential damage to an exchange where Access Seeker Equipment is installed at that exchange, and accords with the principles agreed by the TCF;²¹
- (d) subject to certain restrictions, each party indemnifies the other for liability the other party incurs as a result of a claim from a third party which is a direct result of that party's default;²²
- (e) the Access Seeker indemnifies the Access Provider for certain types of breaches, relating mainly to its obligations under the Mobile Co-location Access Terms²³ which reflects the principles agreed by the TCF;²⁴ and

¹⁹ Clause 22 of the Mobile Co-location General Terms.

²⁰ Clauses 19.1, 19.2, 20.1 and 20.2 of the Mobile Co-location General Terms.

²¹ Page 11 of TCF paper titled "Recommendations for Final Agreement at the Mobile Co-location Working Party Meeting on 28 March 2008".

²² Clauses 19.6 and 20.6 of the Mobile Co-location General Terms.

²³ Clause 19.6 of the Mobile Co-location General Terms.

²⁴ Page 11 of TCF paper titled "Recommendations for Final Agreement at the Mobile Co-location Working Party Meeting on 28 March 2008".

(f) the Access Seeker must maintain insurance cover in specified amounts.²⁵

²⁵ Clause 7.7 of the Mobile Co-location General Terms.

9. MOBILE CO-LOCATION SERVICE DESCRIPTION

50. The Notice states that Vodafone's STP:

"must include a 'Service Description' detailing all components of the Mobile Co-location Service, including a description of all relevant facilities that are able to be co-located. Specifically, the Service Description must provide for:

- i. co-location on or with any towers, poles, masts or other similar structures;
- ii. co-location on or with all sites, buildings or utility services that are associated with the kinds of structures referred to in (i); and
- iii. all feasible variants, or combinations, of co-location on or with those relevant facilities.

In addition, unless impracticable, the 'Service Description' must set out various 'standard site types', ensuring that the differences between these site types are clearly defined. Where appropriate, terms and conditions reflecting differences between standard site types must be included throughout the Proposal".²⁶

51. In addition, section 30G(1)(d) of the Act states that the STP must be consistent with the description of the service in Part 3 of Schedule 1 of the Act.

52. Vodafone believes that Mobile Co-location Service Description contained in the STP meets the above requirements of the Notice and the Act. In particular, the Mobile Co-location Service Description follows closely the specified service described as "Co-location on Cellular Mobile Transmission Sites" in Part 3 of Schedule 1 of the Act. In particular, it provides for the following essential elements:

- (a) it is a service that enables the co-location of equipment (including any necessary supporting equipment) on or with certain relevant facilities; and
- (b) those relevant facilities include:
 - i. any towers, poles, masts or other similar structures that are used for the transmission or reception of telecommunications via a mobile network; and

²⁶ Paragraph 12(e) of the Notice.

- ii. all sites, buildings or utility service associated with the structures referred to in (i).

53. The Mobile Co-location Service Description retains the use of the terminology used in the Act, including use of the terms “relevant facilities”, “mast”, “site”, “building”, “utility service” and “cellular mobile telephone network”. An illustrative diagram of the Mobile Co-location Service using this terminology is set out at Appendix A of the Mobile Co-location Service Description.

54. Vodafone does not believe that the Mobile Co-location Service definition needs to be, or should be, extended in scope beyond what is set out in the Act. The definition set out in the Mobile Co-location Service Description is specific enough in that it:

- (a) details all components of the Mobile Co-location Service;
- (b) includes a description of the relevant facilities that are able to be co-located, by using terms which are defined in the Mobile Co-location General Terms;
- (c) outlines the assistance that the Access Provider will provide in relation to the Mobile Co-location Service;
- (d) outlines the exclusions that apply in relation to the Mobile Co-location Service; and
- (e) allows an Access Provider and Access Seeker to have clarity and certainty in relation to what each party is to provide and receive, respectively.

55. In summary, Vodafone believes that it would be contrary to the Act to extend the definition of the Mobile Co-location Service beyond what is provided for in Part 3 of Schedule 1 and, furthermore, that it is unnecessary to do so. This approach to the definition of the Mobile Co-location Service was adopted in the Code. Vodafone notes that when the Commission approved the Code, it observed that the term “Co-location on cellular mobile transmission sites” has a specific definition under the Act, and that the TCF had appropriately adopted the Act’s definition of ‘co-location’ and ‘relevant facilities’.²⁷ Given the Commission’s decision in this respect was made less than 18 months ago, and that since then there has been no statutory change to the definition of these terms, Vodafone does not believe that there is any reason at this

²⁷ Commerce Commission, *Decision on whether to approve the Telecommunications Carriers’ Forum Draft Code for Co-location of Radiocommunications Services Regulated under the Telecommunications Act 2001*, Decision 593, 7 December 2006, at pars 77 and 78.

point in time for a different approach to be taken.

56. In addition, the Notice requires that the Mobile Co-location Service Description define the service by detailing all components of the service. The Notice does not require that the Mobile Co-location Service Description define the manner in which that service is to be provided. The Mobile Co-location Service Description is the 'what' aspect of the Mobile Co-location Service. Details in relation to 'how' the Mobile Co-location Service is to be provided are set out in the other documents which make up the Mobile Co-location Terms.

Standard Site Types

57. The Notice states that, unless impracticable, the Mobile Co-location Service Description must set out various 'standard site types', ensuring that the differences between these site types are clearly defined. Where appropriate, terms and conditions reflecting differences between standards site types must be included throughout the STP.²⁸
58. Vodafone notes that it has not strictly identified a set of specific standard site types. It believes that doing so would be impracticable for the purposes of this STP, as an STD must specify the non-price terms and conditions upon which all Access Providers will provide the Mobile Co-location Service to Access Seekers. That is, there are likely to be material differences between sites on different Access Provider's networks, even where such sites purport, on paper, to be of the same 'standard' type. Accordingly, rather than endeavouring to specify standard site types for all Access Providers, Vodafone has instead sought to articulate certain procedures that could be utilised to identify standard or substantially similar site types within a given Access Provider's network. Vodafone believes this to be a more helpful way of addressing the Notice requirements.
59. Vodafone considers it is most appropriate that the standard site types be included in the Mobile Co-location Operations Manual. The provisions relating to standard site types are accordingly set out in section 28 of the Mobile Co-location Operations Manual, which describes the way in which standard site types may be used for the provision of the Mobile Co-location Service. In particular it provides for:

- (a) the purposes of having standard site types;

²⁸ Paragraph 12(e) of the Notice.

- (b) how standard site types will be identified, through the use of a common format database; and
 - (c) the procedure for developing standard site type solutions and how these will be used. This concept is also covered in the Interference Management and Design document.
60. More specifically, the Mobile Co-location Operations Manual provides for the differences between standard site types to be identified in the common format site database. Each standard site type is, for the most part, based on the main structural aspects of the relevant antenna support structure. Each application for the Mobile Co-Location Service submitted by an Access Seeker for a Relevant Facility may include reference to a particular standard site type. Such an application will then be processed and evaluated by the Access Provider in accordance with the same process for all applications, and will be subject to the same terms and conditions.

Mobile Co-location Service Assistance

61. The Mobile Co-location Service Description provides for certain items of service assistance that will be provided by the Access Provider to the Access Seeker. Such assistance will be provided in accordance with the Mobile Co-location Operations Manual.

Mobile Co-location Service Exclusions

62. The Mobile Co-location Service Description provides for certain exclusions to the Mobile Co-location Service. These relate mainly to items which fall outside the scope of the definition of the specified service in the Act.

10. MOBILE CO-LOCATION SERVICE LEVEL TERMS

63. The Notice states that Vodafone's STP:

"must include 'Service Level Terms' (SLA) that specify performance levels in relation to the supply of the Mobile Co-location Service. The service levels defined in the SLA must be based around the corresponding operational processes or procedures set out in the Operations Manual. The Service Level terms must include proposed remedial actions and outcomes where the access provider does not meet its SLAs."²⁹

64. Vodafone has complied with this requirement in its STP. In particular, it has included specific performance levels which relate to the operational processes and procedures set out in the Mobile Co-location Operations Manual. The Mobile Co-location Service Level Terms also provide for remedial actions and outcomes where the Access Provider does not meet the prescribed service levels.

Service Level Overview

65. In drafting the Mobile Co-location Service Level Terms, Vodafone took into account the following:

- (a) the requirements of the Notice;
- (b) the nature of the Mobile Co-location Service;
- (c) the UCLL Co-location STD; and
- (d) the recommendations and principles accepted in a number of TCF Codes, such as the LMNP Code, the Transfer Code and the Customer Complaints Code.

66. The proposed service levels are listed in Appendix 1 of the Mobile Co-location Service Level Terms. These service levels relate to various stages of the end-to-end process set out in Part 4 of the Mobile Co-location Operations Manual. The main service levels relate to:

- (a) site desktop assessment;
- (b) detailed site design;

²⁹ Paragraph 12(g) of the Notice.

- (c) planned and unplanned outages; and
- (d) fault management.

67. More specifically, Vodafone has included seven service levels in the Mobile Co-location Service Level Terms which relate to the following service attributes and deliverables:

- (a) issue of site data pack;
- (b) decision on Access Seeker's full site application;
- (c) decision on whether to issue the final site approval;
- (d) approval of project plan;
- (e) notification of planned outages;
- (f) notification of unplanned outages; and
- (g) meeting expected restoration times.

68. Each of these service attributes has a separate service level which corresponds to the relevant operational process or procedure set out in the Mobile Co-location Operations Manual. The timeframes associated with the service levels will enable the Mobile Co-location Service to be provided in a timely manner.

Tolerance Levels

69. Vodafone has used a tolerance level in setting its service levels in much the same way as tolerance levels were used in the UCLL Co-location STD. The tolerance levels take into account factors such as:

- (a) the provision by the Access Seeker of inaccurate information in its mobile co-location applications;
- (b) unexpected events or unavailability of resources; and
- (c) prioritisation of work.

70. Vodafone has used what it believes are appropriate tolerance levels in relation to

each of these factors. In this regard, it believes these tolerance levels are much the same as those determined by the Commission in the UCLL Co-location STD; are consistent with Vodafone's standard practice with its suppliers; and provide a high level of certainty to all parties with respect to the achievement of the relevant service level.

Future Service Levels

71. Vodafone has included a mechanism for determining future service levels. These can be fixed via the change mechanism contained in section 10 of the Mobile Co-location General Terms, which is discussed in more detail in Part 11 of this submission.

Proposed Remedial Actions For Not Meeting Service Levels

72. Appendix 2 to the Mobile Co-location Service Level Terms sets out remedial actions and outcomes in the event that the Access Provider does not meet the relevant service level. For all seven service levels, Vodafone proposes that it undertake a number of remedial measures in the event an Access Provider fails to meet its service levels. These involve the Access Provider providing a report:

- (a) that is to be provided to the Access Seeker and the Commission detailing the cause of, and procedure for correcting, such service level default;
- (b) outlining steps taken to remedy such default, and the effectiveness of those steps;
- (c) describing any previous service level defaults in respect of delivery of that service level in the previous six months; and
- (d) for each month until the service level default is remedied.

73. Further, Vodafone has included additional performance penalties for the following four service levels:

- (a) issue of site data pack;
- (b) decision on Access Seeker's full site application;
- (c) decision on whether to issue the final site approval; and

(d) approval of project plan;

74. Vodafone has set what it believes are appropriate performance penalty principles in relation to each of these service levels. The principles are that:

(a) penalties will be calculated as a percentage of the standard charge relevant for the phase/stage of the process for that service level which has not been met, multiplied by the number of instances during a calendar month where the Access Provider's performance fell below the specified tolerance level; and

(b) all performance penalties paid by the Access Provider will be set off against the total amount of the monthly charges otherwise due to be paid by the Access Seeker for the Mobile Co-location Service.

75. The principles are largely derived from the penalty performance measures contained in the UCLL Co-location STD. Vodafone believes that a financial penalty principle is appropriate for these particular service levels as it provides a suitable incentive for the Access Provider to meet its obligations under the Mobile Co-location Service Levels Terms.

76. Performance penalties do not apply to the service levels for the notification for planned outages; the notification for unplanned outages; and meeting expected restoration times. Vodafone believes the remedial actions referred to in paragraph 72 above are sufficient for these particular service levels.

Exclusions

77. Various exclusions and limitations are included with each service level, and these generally relate to the Access Seeker's obligation to provide accurate forecasts. These also contain cross-references to the relevant processes and procedures in the Mobile Co-location Operations Manual.

Implementation

78. Consistent with the Mobile Co-location Implementation Plan, performance penalties will not apply during the period prior to the completion of the Soft Launch.

Mechanism to amend the Mobile Co-location Service Level Terms

79. The Mobile Co-location Service Level Terms are able to be amended in the same

manner as the Mobile Co-location Operations Manual, through the mechanism set out in section 10 of the Mobile Co-location General Terms.

11. MOBILE CO-LOCATION OPERATIONS MANUAL

80. The Notice states that Vodafone's STP:

"must include an 'Operations Manual' setting out the operational processes and procedures, in as much detail as possible, for the provision of the Mobile Co-location Service. The Operations Manual must, as a minimum, include processes and procedures for:

- i. ordering and provisioning of Mobile Co-location Services (including 'order acknowledgement', 'notification of expected completion date', 'notification of rejection', 'confirmation of completion');
- ii. billing;
- iii. sharing of information regarding existing sites ('initial site readiness'). This information must include, but is not limited to, available land area, space on towers, poles and masts, existing access tracks and utility services. The Operations Manual must also include a process to ensure that this information remains current;
- iv. completion of any preparatory work required to be performed by the access provider before the access seeker is able to install its equipment at a site ('footprint readiness');
- v. fault management;
- vi. forecasting requirements including processes to ensure that the various forecasts are based on real anticipated needs;
- vii. a process for addressing prioritisation of access seekers, including processes for dealing with capacity constraints on the relevant facilities; and
- viii. access seeker and access provider deliverables;

In addition, processes and procedures specific to individual access providers of the Mobile Co-location Service, if appropriate, are to be included as appendices to the 'Operations Manual'. These appendices are expected to include any company or site

specific health and safety instructions.”³⁰

Level of detail included

81. The Mobile Co-location Operations Manual is set out at Schedule 3 of the Mobile Co-location General Terms.

82. Section 30G(1)(a) of the Act requires an STP to specify sufficient terms to allow, without the need for the access seeker to enter into an agreement with the access provider, the designated access service or specified service to be made available within the time frames specified under paragraph (c).

83. The Commission requires that the STP include all of the terms required to provide relevant facilities for, and the installation and maintenance of, an access seeker’s equipment, including the access seeker’s rights and obligations when accessing co-location sites.³¹

84. Vodafone has met the above requirements through the provisions that are set out in the documents which make up the Mobile Co-location Terms, including the Mobile Co-location Operations Manual. In particular, the Mobile Co-location Operations Manual sets out detailed provisions relating to the operational processes and procedures for the Mobile Co-location Service.

85. Vodafone has also included in Appendix E the timeframes which it expects will apply to each of the Access Provider’s and Access Seeker’s tasks. These tasks and indicative timeframes were recommended by the TCF Operations Manual workstream, however with the proviso that they were not finally agreed by all parties due to the lack of detail for each individual task.³² Vodafone believes the above timeframes (which in some cases apply to both the Access Provider and the Access Seeker) are appropriate in length and will enable the Mobile Co-location Service to be provided in a timely manner.

³⁰ Paragraph 12(f), “Mobile Co-location Standard Terms Determination: Notice for Standard Terms Proposal” from Commerce Commission to Vodafone NZ Limited, dated 8 February 2008.

³¹ Paragraph 12(c), “Mobile Co-location Standard Terms Determination: Notice for Standard Terms Proposal” from Commerce Commission to Vodafone NZ Limited, dated 8 February 2008.

³² Page 28 of TCF paper titled “Recommendations for Final Agreement at the Mobile Co-location Working Party Meeting on 28 March 2008”.

Reference to technical standards

86. The Commission requires that the STP must include processes and procedures specific to individual Access Providers of the Mobile Co-location Service, if appropriate, as appendices to the Mobile Co-location Operations Manual. These appendices are expected to include any company or site specific health and safety instructions.³³
87. Vodafone considers that it has complied with this requirement. While it has not inserted all relevant technical standards into its STP, the Mobile Co-location Operations Manual does set out, by reference, a number of relevant technical standards and specifications. Given the number and length of these documents, Vodafone believes it would be neither practical nor helpful to include all these standards in its STP. Further, an STD (and, by implication, an STP) must include terms and conditions which all Access Providers will comply with in order to provide the Mobile Co-location Service to all Access Seekers. Vodafone expects that the technical specifications for the Mobile Co-location Service will vary from one Access Provider to another, and therefore believes that, for the purposes of this STP, it is not practical to include a generic set of technical specifications that are common to all Access Providers.
88. At this point, however, Vodafone is collating all of the relevant procedures and technical specifications that relate to its network so that they can be made available to Access Seekers in a format that is suitable for the Mobile Co-location Service.

Review and amendment of the Mobile Co-location Operations Manual

89. The mechanism to amend the Mobile Co-location Operations Manual is set out in clause 10 of the Mobile Co-location General Terms. These provisions are based on the wording used in the UCLL Co-location STD, but have been amended to recognise that there will be multiple Access Providers for the Mobile Co-location Service. They have also been amended to take into account the principles agreed by the TCF.³⁴

³³ Paragraph 12(f), "Mobile Co-location Standard Terms Determination: Notice for Standard Terms Proposal" from Commerce Commission to Vodafone NZ Limited, dated 8 February 2008.

³⁴ Page 11 of TCF paper titled "Recommendations for Final Agreement at the Mobile Co-location Working Party Meeting on 28 March 2008"

90. The main amendments which have been made to the change mechanism wording in the UCLL Co-location STD are:

- (a) any Access Seeker or Access Provider may propose a change to the Mobile Co-location Operations Manual (or the Mobile Co-location Service Level Terms);
- (b) the party proposing the change must give notice to all Access Providers, all Access Seekers (who are not otherwise an Access Provider), the TCF and the Commission. That party must also publish the notice on its website;
- (c) the TCF will then notify all parties of the relevant details of the proposed change;
- (d) any Access Seeker or Access Provider may object to the change. Any such objection must be provided to all Access Providers, all Access Seekers (who are not otherwise an Access Provider), the TCF and the Commission. Objections must be provided within 10 Working Days from the date the original notice is received;
- (e) in the event that any party objects to the proposed change, all Access Seekers and Access Providers have 20 Working Days from the date of the TCF notification to negotiate and agree the proposed change. The negotiation process (using the TCF) and voting structure remains as it was in the UCLL Co-location STD, save for taking into account that there will be multiple Access Providers. The TCF will then submit to the Commission any agreed proposed change (or any change accepted by the independent recommendation maker). If the change is accepted the Commission, the TCF must notify all parties of this; and
- (f) Vodafone has removed the obligation in the UCLL Co-location STD (for Telecom) to review the Mobile Co-location Operations Manual every 24 months or at any time in its discretion. These provisions appear to Vodafone to be inappropriate where multiple Access Providers are contemplated. Moreover, any Access Seeker or Access Provider will now have the right to propose a change to the Mobile Co-location Operations Manual (and Mobile Co-location Service Level Terms) at any time.

Ordering and Provisioning

91. The Notice requires that Vodafone includes in its STP processes and procedures relating to the ordering and provisioning of the Mobile Co-location Service. Section

12 of the Mobile Co-location Operations Manual sets out such provisions.

92. The terms relating to the provisioning system enable the Access Seeker to make applications for the Mobile Co-Location Service, and provide for application acknowledgment, notification and tracking. They also include detailed end-to-end processes and procedures relating to the ordering and provisioning of the Mobile Co-location Service.

Billing

93. The Notice requires that Vodafone includes in its STP processes and procedures relating to billing. Part 7 of the Mobile Co-location Operations Manual sets out these provisions.
94. The provisions relating to billing outline the requirements of the billing process, including invoicing and billing enquiries. The provisions have been drafted in such a way as to allow each Access Provider to implement its own billing system.
95. The Mobile Co-location Operations Manual identifies which elements of the Mobile Co-location Service the Access Provider may elect to charge the Access Provider for. These items are contained in a Charges List, which forms Appendix [s]. This will be invoiced and paid for in accordance with the Mobile Co-location General Terms.

Common Format Site Database

96. The Notice requires that Vodafone includes in its STP processes and procedures relating to the sharing of information regarding existing sites ('initial site readiness'). This information must include, but is not limited to, available land area; space on towers; poles and masts; existing access tracks; and utility services. The Operations Manual must also include a process to ensure that this information remains current. Section 27 of the Mobile Co-location Operations Manual sets out such provisions.
97. The common format site database will inform the Access Seeker as to which sites should be feasible for co-location so that the Access Seeker will be able to use the data on a multi-site basis to decide which sites it wishes to apply to use. In contrast to the situation that prevails under the existing Code, the Access Seeker will have visibility of complete and up-to-date data relating to Relevant Facilities. In turn, this should be of benefit to the Access Seeker, as it should allow it to filter that data on a multi-site basis.

98. The common format site database will contain information relating to the Relevant Facilities that will in turn enable the Access Seeker to identify those Relevant Facilities which it believes are suitable to apply for the Mobile Co-location Service. The TCF agreed certain principles relating to the categories of the common format database,³⁵ and these have been reflected in the Mobile Co-location Operations Manual. Provisions have been included setting out the frequency with which the information must be updated, and how each party should contribute to such updating. Further detailed information relating to a Relevant Facility is shared by the Access Provider when the Site Data Pack is provided to the Access Seeker.

Site Readiness

99. The Notice requires that Vodafone includes in its STP processes and procedures relating to the completion of any preparatory work required to be performed by the access provider before the access seeker is able to install its equipment at a site ('footprint readiness').

100. The TCF agreed a general principle that the Access Provider is to be the "enabler", and the Access Seeker is to be the "implementer", of the Mobile Co-location Service.³⁶ In this context, section 19 of the Mobile Co-location Operations Manual provides that the Access Seeker is responsible for any readiness work required prior to the installation of its equipment at the Relevant Facilities.

Fault Management

101. The Notice requires that Vodafone includes in its STP processes and procedures relating to fault management. Part 10 of the Mobile Co-location Operations Manual sets out such provisions.

102. Detailed provisions relating to faults have been included which cover the diagnosing of faults; each party's responsibilities for faults; and how faults will be reported. Each party's responsibilities in relation to faults are drafted in accordance with the principles agreed by the TCF.³⁷

³⁵ Page 36 of TCF paper titled "Recommendations for Final Agreement at the Mobile Co-location Working Party Meeting on 28 March 2008"

³⁶ Page 27 of TCF paper titled "Recommendations for Final Agreement at the Mobile Co-location Working Party Meeting on 28 March 2008"

³⁷ Page 37 of TCF paper titled "Recommendations for Final Agreement at the Mobile Co-location Working Party Meeting on 28 March 2008"

Forecasting

103. The Notice requires that Vodafone includes in its STP processes and procedures relating to forecasting requirements including processes to ensure that the various forecasts are based on real anticipated needs. Section 8 of the Mobile Co-location Operations Manual sets out such provisions.
104. The process and procedures in relation to forecasting requirements are based upon those contained in the UCLL Co-location STD, and reflect the general principles agreed by the TCF.³⁸ Vodafone has included an additional level of detail relating to forecasting to ensure that forecasts are based on actual needs. The Access Seeker is required to provide further forecasting detail, including in relation to the region which each application relates to; the number of forecasted planned work applications; and the number of forecasted builds.

Prioritisation and Queuing

105. The Notice requires that Vodafone includes in its STP a process for addressing prioritisation of access seekers, including processes for dealing with capacity constraints on the relevant facilities. Sections 9 and 10 of the Mobile Co-location Operations Manual set out such provisions.
106. A system for the prioritisation of Access Seekers has been included, and this is based upon the principle of "first come, first served". This system is in line with the provisions of the UCLL Co-location STD. The STP also includes a capacity limit of 30 new site data pack applications, to be processed by the Access Provider in a given month, for the total number of Access Seekers. This capacity limit has been included in order to manage potential resource constraints and to deliver the Mobile Co-location Service to all Access Seekers equitably. If the Access Seekers' forecast(s) indicate that the total number of site data pack applications will exceed the capacity limit of 30 per month, the capacity limit will be spread evenly across all Access Seekers. The capacity limit means that by month three the Access Provider could be processing up to 90 different applications and, by month six, up to 180 applications, all at different stages in the end-to-end process. Vodafone believes that this approach allows for more applications to be processed over time, compared to other alternatives, such as a limit on the number of concurrent applications. So, for example, if instead there was a limit of 30 for the number of concurrent applications, the capacity limit proposed in

³⁸ Page 28 of TCF paper titled "Recommendations for Final Agreement at the Mobile Co-location Working Party Meeting on 28 March 2008".

the STP would mean a six-fold increase on this number by the sixth month of when applications were first received.

107. In addition, a priority list will be completed by each Access Seeker, and provided to the Access Provider, 10 working days before the end of each month. The priority list will rank the Access Seeker's priorities for site data pack applications to be made in the following month. The Access Provider will then notify each Access Seeker how many site data pack applications it will process based on its priority list and the capacity limit. The Access Provider will use its reasonable endeavours to process applications in excess of the capacity limit and will do so in accordance with the prioritisation methodology set out above.

108. A queuing policy has been included to manage demand from Access Seekers for Relevant Facilities. This policy is in accordance with the principles agreed by the TCF, and includes the concepts of "first come first served" and "use it or lose it".³⁹ The policy provides that the Access Seeker is first placed in the queue when an initial site application is submitted to the Access Provider.

109. Vodafone notes, however, that one of the principles agreed by the TCF provides that the Access Seeker is to be placed in the queue when a full site application is submitted by the Access Seeker.⁴⁰ In contrast, however, a further principle agreed by the TCF provides that the "first come, first served" principle should apply to an Access Seeker applying for the Mobile Co-location Service at Relevant Facilities. Given that one of the fundamental principles of the queuing policy is that it should operate on a "first come, first served basis", it would appear sensible that an Access Seeker should be placed in the queue at the initial site application stage. In addition, it would not be practical or efficient for an Access Seeker to invest a significant amount of resource, only to subsequently learn that it is not in the queue. Putting an Access Seeker in the queue at the initial application stage would ensure applications are processed by the Access Provider in a more fair and equitable manner. Accordingly, Vodafone has included a queuing policy which conforms to the "first come, first served" principle, which necessarily involves the Access Seeker joining the queue at the initial site application stage.

³⁹ Page 29 of TCF paper titled "Recommendations for Final Agreement at the Mobile Co-location Working Party Meeting on 28 March 2008".

⁴⁰ Page 29 of TCF paper titled "Recommendations for Final Agreement at the Mobile Co-location Working Party Meeting on 28 March 2008".

Deliverables

110. The Notice requires that Vodafone includes in its STP processes and procedures relating to access seeker and access provider deliverables.

111. The Mobile Co-location Operations Manual contains in various sections the deliverables and responsibilities of the Access Seeker and Access Provider. In all such sections the party responsible for each deliverable is identified and, where relevant, the timeframes when such deliverable must be provided.

Standard Site Types

112. The Notice states that, unless impracticable, the Mobile Co-location Service Description must set out various 'standard site types', ensuring that the differences between these site types are clearly defined. Where appropriate, terms and conditions reflecting differences between standard site types must be included throughout the STP.⁴¹ Refer to Part 9 above in relation to this requirement.

Applications

113. Vodafone has included in the Mobile Co-location Operations Manual a five-stage end-to-end process for the provision of the Mobile Co-location Service. At different stages of that process, there is a requirement for various types of applications to be submitted by the Access Seeker. The STP provides that an application may be rejected if it fails to meet objective criteria with regard to the limits on standard access principles.⁴² The criteria are listed and these reflect the applicable limits on access principles for the Mobile Co-location Service set out in the Act. Vodafone notes that when referring to the rights of the Access Provider to reject a request for co-location, the Commission has previously noted in relation to its consideration of the Code that it is a requirement that any approved code must be consistent with the applicable access principles, and accordingly the limits on those principles.⁴³ Vodafone therefore believes that the application approval process is in line with the Act and with previous comments made by the Commission in relation to the application of the access principles.

⁴¹ Paragraph 12(e) of the Notice.

⁴² Clause 12.8 of the Mobile Co-location Operations Manual.

⁴³ Commerce Commission, *Decision on whether to approve the Telecommunications Carriers' Forum Draft Code for Co-location of Radiocommunications Services Regulated under the Telecommunications Act 2001*, Decision 593, 7 December 2006, at para 74.

Greenfield Co-location

114. Section 11 of the Mobile Co-location Operations Manual sets out provisions in relation to the circumstances where an Access Seeker or Access Provider wishes to co-operate with another party with respect to the possibility of co-locating at a greenfield site. A greenfield site is a proposed site (not yet built) in an area where two or more parties have an interest in providing or receiving the Mobile Co-location Service.

115. Vodafone notes that the service described as “Co-location on Cellular Mobile Transmission Sites” in Part 3 of Schedule 1 of the Act provides for co-location on Relevant Facilities “that are used for the transmission or reception of telecommunications”. The definition of the Mobile Co-location Service therefore extends to existing Relevant Facilities only, and not those that may be used at some future date, for the transmission or reception of telecommunications.

116. Vodafone further notes, however, that the TCF agreed various principles in relation to greenfield sites.⁴⁴

117. Vodafone has therefore included provisions in section 11 of the Mobile Co-location Operations Manual which reflect the principles agreed by the TCF. Because sites not yet built do not fall within the definition of the Mobile Co-location Service, the process in relation to greenfield sites is a voluntary one, whereby either an Access Seeker or an Access Provider can instigate the process and any party can elect to proceed or otherwise. The provisions contained in section 11 are based on those contained in the ACCC Code.

⁴⁴ Page 34, of TCF paper titled “Recommendations for Final Agreement at the Mobile Co-location Working Party Meeting on 28 March 2008”.

12. MOBILE CO-LOCATION ACCESS TERMS

118. Vodafone has included at Schedule 4 of the Mobile Co-location General Terms the Mobile Co-location Access Terms.

119. Vodafone believes that the UCLL Co-location STD is the appropriate document on which to base the Mobile Co-location Access Terms for the following reasons:

- (a) the UCLL Co-location STD involves a service which has similarities to the Mobile Co-location Service;
- (b) the UCLL Co-location STD is familiar to many parties within the telecommunications industry; and
- (c) the UCLL Co-location STD contains a set of legal terms which have been commented on by many parties within the telecommunications industry, and which have been determined by the Commission.

120. The Mobile Co-location Access Terms have been drafted to reflect those principles agreed by the TCF.⁴⁵

121. For convenience, Vodafone has included in this STP a clean version of the Mobile Co-location Access Terms, as well as a version which shows changes to the Access Terms contained in the UCLL Co-location STD. The following table contains a high level summary and explanation of the key changes made to the Access Terms contained in the UCLL Co-location STD:

Key change to Access Terms in UCLL Co-location STD	Reason
Inclusion of definition of "Landlord" (section 1)	Definitions have been amended to conform to the Mobile Co-location Service. In particular, new terms and definitions have been added

⁴⁵ Page 11 TCF paper titled "Recommendations for Final Agreement at the Mobile Co-location Working Party Meeting on 28 March 2008".

	which reflect the need to take into account the interests of third parties.
Removal of reference to UCLL specific terms (section 1)	Terms which were specific to the UCLL Co-location Service and which do not relate to the Mobile Co-location Service have been removed.
Inclusion of section on the Relevant Occupation (section 8)	A section in relation to the relevant occupation has been included to deal with the need for an Access Seeker to obtain necessary consents prior to installing its equipment. The Mobile Co-location Operations Manual sets out the ways in which the Access Provider will provide reasonable assistance in relation to obtaining such consents.
Inclusion of section on Queuing Policy (section 9)	A section has been included which stipulates the principles of the queuing policy. This is covered in more detail in the Mobile Co-location Operations Manual.
Inclusion of section on extension or revision of Mast (section 10)	A section has been included which outlines the process which must be followed where, under the Interference Management and Design document, it is determined that a Mast be extended or revised.
Inclusion of section on Replacement Mast (section 11)	A section has been included which outlines the process which must be followed where, under the Mobile Co-location Operations Manual, it is determined that a Mast needs to be replaced.
Inclusion of section on Decommissioning (section 12)	A section has been included which outlines the process which must be followed where the Access Provider intends to decommission the Relevant Facilities and where the Access

	<p>Seeker wishes to continue to use those Relevant Facilities. The provisions are based on those contained in the ACCC Code.</p>
<p>Deletion of section on Relocation</p>	<p>The section on relocation in the UCLL Co-location Access Terms has been removed. It is instead included in the Mobile Co-location Operations Manual.</p>

13. MOBILE CO-LOCATION INTERFERENCE MANAGEMENT AND DESIGN

122. The Notice states that Vodafone's STP:

“must include, as a schedule to the Proposal, terms relating to interference management, taking into account all relevant requirements under the Radiocommunications Act 1989 and Radiocommunications Regulations 2001.”⁴⁶

General

123. The Mobile Co-location Interference Management and Design document describes:

- (a) the objectives of managing interference in relation to the Mobile Co-location Service;
- (b) the levels of Unacceptable Performance Degradation in relation to the Mobile Co-location Service;
- (c) Design Principles to avoid Unacceptable Performance Degradation; and
- (d) procedures for interference management in co-location.

The TCF Working Party

124. The Interference Management and Design work stream of the TCF Working Party discussed rules governing interference for mobile co-location, and agreement was reached on a number of matters. In developing the processes for interference management for this STP, Vodafone has incorporated those principles unanimously agreed by the TCF. In incorporating such principles, the intent of the principles unanimously agreed by the TCF has been preserved. Vodafone has also followed the flow and structure of the processes unanimously agreed by the TCF, including in relation to developing the “agreed standard solutions” and “disagreed solutions”.

125. Due to the limited time available, the Interference Management and Design work stream of the TCF Working Party was not able to consider all possible scenarios relevant to developing protocols for interference management. Vodafone has therefore drafted its STP to cover scenarios that were not considered by the TCF. For example, Vodafone has introduced additional steps into the interference management protocols to enable those protocols to operate in a consistent and workable manner with the end-to-end process set out in the Mobile Co-location

⁴⁶ Paragraph 12(i), “Mobile Co-location Standard Terms Determination: Notice for Standard Terms Proposal” from Commerce Commission to Vodafone NZ Limited, dated 8 February 2008.

Operations Manual. Wherever this approach has been taken, the intent of the principles unanimously agreed by the TCF has been preserved.

126. This section outlines the key issues which Vodafone believes were identified as part of the TCF Working Party, and addresses how those issues have been dealt with by Vodafone in the Mobile Co-location Interference Management and Design document. In this regard, it believes the following three key issues were identified:

- a) unacceptable level of performance degradation;
- b) co-location design principles; and
- c) Access Provider forecasting.

127. Each of these is discussed, in turn, below.

Unacceptable Performance Degradation

128. The TCF working party recognised that the provision of the Mobile Co-location Service can degrade the performance of the Access Provider's Network in the form of interference and other changes to Relevant Facilities.

129. The TCF working party reached unanimous agreement on the principle that the provision of the Mobile Co-location Service should not exceed a level of unacceptable performance degradation to the Access Provider's Network.⁴⁷

130. The TCF working party did not, however, reach unanimous agreement on what particular value should represent the maximum level of unacceptable performance degradation for the Access Provider's network and services

Background to Unacceptable Performance Degradation

131. At the outset, Vodafone agrees that co-location on or with Relevant Facilities can, in some circumstances, give rise to significant benefits to mobile network operators ("MNOs") in terms of increasing the efficiency, and lowering the costs, of providing cellular mobile services to end-users. In turn, this can have the benefit of reducing prices paid by, and/or increasing the quality of service provided to, end-users of services provided over this infrastructure. That MNOs see benefits from co-location

⁴⁷ Page 18 TCF paper titled "Recommendations for Final Agreement at the Mobile Co-location Working Party Meeting on 28 March 2008".

on Relevant Facilities is evidenced by the number of agreements between MNOs overseas to co-locate on cellular mobile networks.

132. It is noteworthy, however, that there is a fundamental difference between many of the masts used in New Zealand and those used in some other countries where co-location exists. In many parts of the world outside New Zealand, masts are designed prior to their construction to accommodate antennas and other equipment for multiple operators. This is done by designing the mast in such a way that allows sufficient space on a mast for the construction of antenna by multiple operators. In these circumstances, it is usually not necessary to define a level of unacceptable performance degradation because performance degradation is often minimal. This is because the distance placed between the equipment of different operators on a given mast is sufficient to minimise the likelihood of the signals sent by the equipment generating interference with each other. Examples of masts designed to accommodate mobile co-location in Australia and Germany are shown in Figure 13.1 below.



a) Australian examples



b) German examples

Figure 13.1 Examples of masts designed for mobile co-location in Australia and Germany.

133. In New Zealand, however, existing masts have not been generally designed for the purpose of accommodating multiple network operators. Further, the requirements of the Resource Management Act 1991 and its amendments have meant that masts are typically designed to have a low visual impact and so are smaller in size than those typically found overseas. Examples of typical masts found in New Zealand are shown in Figure 13.2 below.



Figure 13.2 Typical masts for mobile services in New Zealand.

134. In general, therefore, masts in New Zealand tend to be smaller in size than those found overseas. For instance, the average height of masts built by Vodafone is around 16 metres. In contrast, the average height of masts for Vodafone Operating Companies in Europe is around 30 metres.

135. In circumstances where masts are not originally designed with the purpose of accommodating multiple operators and masts are smaller in size, the provision of the Mobile Co-location Service can cause performance degradation to the Access Provider's services. This is due to the limited degree of separation in the placement of the Access Provider and the Access Seeker's antennae and other equipment that would occur if they co-locate on a given set of Relevant Facilities. This is because additional equipment placed on a small mast may end up being so close to each other that signals sent by the equipment end-up interfering with each other. Importantly, this does not mean that co-location is impossible. Rather, it simply means that care must be exercised to minimise the risk to existing services wherever co-location is being considered.

136. When considering the STP, therefore, Vodafone believes the Commission should recognise that co-location on cellular mobile transmission sites in New Zealand will generally not be without cost to consumers. While co-location may bring forward the date from which consumers can receive services from additional MNOs – and therefore may bring with it the potential for improved competition – it can also lead to

a degradation in the performance of existing mobile networks. This can come in many forms, including reduced network coverage and decreased data speeds for mobile broadband networks, as detailed further below. To avoid the significant detrimental impact of performance degradation of services to end-users, it is therefore essential to define a maximum level of performance degradation that can be accepted as a result of the provision of the Mobile Co-location Service in New Zealand.

Determining an appropriate level of unacceptable performance degradation

137. In making an STD, the Commission is required to consider the purpose set out in section 18 of the Act. Section 18 of the Act describes the purpose of Part 2 and Schedules 1, 3 and 3A as follows:

18 Purpose

(1) The purpose of this Part and Schedules 1 to 3 is to promote competition in telecommunications markets for the long-term benefit of end-users of telecommunications services within New Zealand by regulating, and providing for the regulation of, the supply of certain telecommunications services between service providers.

(2) In determining whether or not, or the extent to which, any act or omission will result, or will be likely to result, in competition in telecommunications markets for the long-term benefit of end-users of telecommunications services within New Zealand, the efficiencies that will result, or will be likely to result, from that act or omission must be considered.

138. A crucial implication of this purpose is that competition is not to be promoted for its own sake. Rather, it is to be promoted “for the long-term benefit of end-users”. Where a given regulatory action might promote competition but not in a way that would, overall, provide a benefit to end-users, then the purpose as outlined in section 18 of the Act will not be achieved.

139. As indicated above, while co-location on cellular mobile transmission sites can generate benefits for end-users, it can also cause detriment to the quality of service experienced by end-users. In these circumstances, this means there should be no presumption that co-location on all cellular mobile transmission sites in New Zealand would always produce improved outcomes for end-users and therefore meet the

underlying objectives contained in section 18 of the Act.

140. In order for co-location on given mobile cellular transmission sites to meet the objectives of the Act, Vodafone believes it important that the Commission balance two competing effects that can arise from mobile co-location:

- a) the possible pro-competitive and efficiency benefits that may result for end-users as a result of co-location on a given cellular transmission site; and
- b) the likely detriment to end-users that will result from any performance degradation that such co-location may cause.

141. On balance, therefore, co-location on a given Relevant Facility should only occur when the pro-competitive and efficiency benefits that may occur would be likely to outweigh the detrimental impact caused to end-users as a result of the performance degradation that mobile co-location can cause.

142. In principle, it may be possible for the Commission to seek to estimate the pro-competitive and efficiency benefits generated for end-users as a result of mobile co-location on a given Relevant Facility. In practice, however, such estimation is likely to be prohibitively costly to determine on a site-by-site basis. Hence, while Vodafone can provide estimates of the potential detriment that could be caused to end-users as a result of different levels of performance degradation (as set out in more detail in paragraphs 146 to 156 below), it is not aware of any estimates of the quantum of benefits consumers might be expected to experience as a result of co-location on a given relevant facility. Where this is the case, it is arguable that the Commission should accept an STP that proposes that co-location should give rise to zero performance degradation, as there may well be no readily available evidence to suggest end-users will actually benefit, on balance, from co-location occurring with any level of performance degradation.

143. While Vodafone sees some merit in this position, it recognises that such a position may be overly cautious. Rather, it has assumed that co-location will be beneficial for end-users, unless it results in more than a minimal level of performance degradation of services to end-users. For this reason, it believes some careful limits have to be put in place to ensure performance degradation is kept to a minimum. In this regard, Vodafone has proposed three key measures in its STP to minimise the potential harm to end-users that might result from co-location on or with Relevant Facilities. In particular, it proposes that “Unacceptable Performance Degradation” in the STP is

defined to be any one or more of the following:

- a) isolation of less than 30 dB between the antenna port of the Access Provider's receiving base station and the antenna port of the Access Seeker's transmitting base station;
- b) a total level of loss from the Access Provider's link budget of more than 0.5 dB in either the uplink budget or the downlink budget;
- c) performance degradation which affects the quality of service in more than a minor way.

144. The performance degradation in paragraph 143(c) above may occur even if the isolation level in paragraph 143(a) is met and the link budget loss in paragraph 143(b) is not exceeded. This is because even the most careful engineering cannot do more than approximate reality. So, while the levels in paragraphs 143(a) and (b) can be estimated before equipment is installed, that analysis cannot provide for actual site specific factors which could negatively impact on performance. Accordingly, it is important to include the additional condition contained in paragraph 143(c) above.

Justification for minimum Isolation

145. The minimum isolation of 30 dB referred to above is a proven and commonly accepted value ensuring enough protection to minimise interference (as described in 3GPP Specification TS 25.104 and TR 45.050). The use of this minimum isolation value aligns with international best practice.

Justification for maximum link budget degradation

146. Due to New Zealand's unique circumstances, as discussed in paragraphs 132 to 136 above, the minimum isolation value referred to in paragraph 143(b) above will not have the effect of eliminating all performance degradation that could result from the provision of the Mobile Co-location Service. Hence, it is important to also define a maximum level of tolerable performance degradation to an Access Provider's network and services to protect end-users from an excessive reduction to their consumer experience.

147. To help determine an appropriate maximum level of acceptable performance degradation, at and beyond which performance will be deemed unacceptable, it is important to recognise that while an Access Provider's Relevant Facility will typically

be designed to provide mobile services to a certain target area, any performance degradation due to the provision of the Mobile Co-location Service can reduce the available path loss in the designed link budget of the Relevant Facility. The designed link budget of a Relevant Facility is a calculation of power and noise levels between the transmitter and receiver (uplink or downlink) that takes account of all gain and loss factors to ensure the designed quality of service. Any reduction in the link budget can affect existing end-users in two main ways: a loss of coverage and reduced data speed. The impact of 0.5 dB performance degradation on each of these factors is considered, in turn, below.

148. With regard to the estimated loss of coverage, Vodafone has relied on the Okumura-Hata cell range model (the O-H model). The O-H model is a widely-used model in radio frequency propagation estimations for predicting the total path loss of cellular transmissions in built-up areas.

149. In this regard, Vodafone has estimated the percentage loss of coverage area as a function of the degradation on link budget for a typical GSM link budget for a network operating in the 900 MHz frequency range.⁴⁸ The results of these estimations are shown in Figure 13.3 below, which shows the percentage loss of coverage area that would be expected to result from given levels of performance degradation (measured in dB) on the link budget.

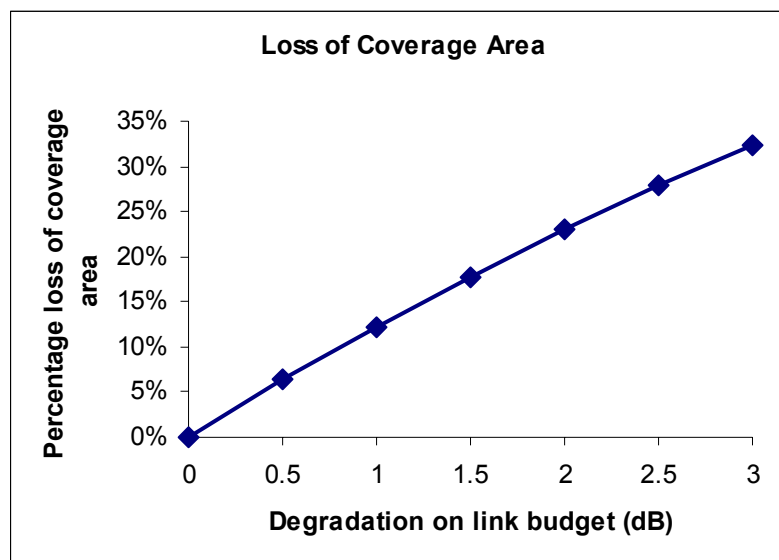


Figure 13.3 Percentage loss of coverage area as a function of degradation

⁴⁸ Similar coverage loss is expected for a typical UMTS link budget operating in the 2100 MHz frequency range. In this scenario, the COST-231 cell range model is used instead of the O-H model.

on link budget for a typical GSM link budget at 900MHz.

150. Figure 13.3 shows that a level of performance degradation of 0.5 dB would be expected to give rise to a loss of approximately six per cent of the coverage area from the Relevant Facility on the link budget. Practically, such a reduction in coverage area can render customers on the fringe of the original coverage area without any mobile service. This is a particular concern for customers in rural and remote locations who may be heavily impacted by any reductions in mobile network coverage. In addition to fringe customers, the reduction of link budget can also cause loss of coverage to in-building customers who may suffer high in-building penetration loss and a loss of coverage to customers that are physically moving during a call and/or a connection.
151. Vodafone notes that Figure 13.3 shows that the level of coverage loss increases roughly proportionately with increases in the level of performance degradation. For instance, an increase in the level of performance degradation to 1 dB would be expected to lead to a reduction in coverage area of around 12 per cent.
152. With regard to slower rates for mobile broadband, Vodafone notes that one of the major factors that determines the maximum data rate an end-user can experience is the quality of the signal received. Any degradation on the link budget can reduce the quality of the received signal, and therefore reduce the maximum data rates available to end-users. In this regard, Figure 13.4 shows the theoretical maximum data rates that can be expected to be achieved on a typical UMTS Site offering HSDPA for given levels of performance degradation.

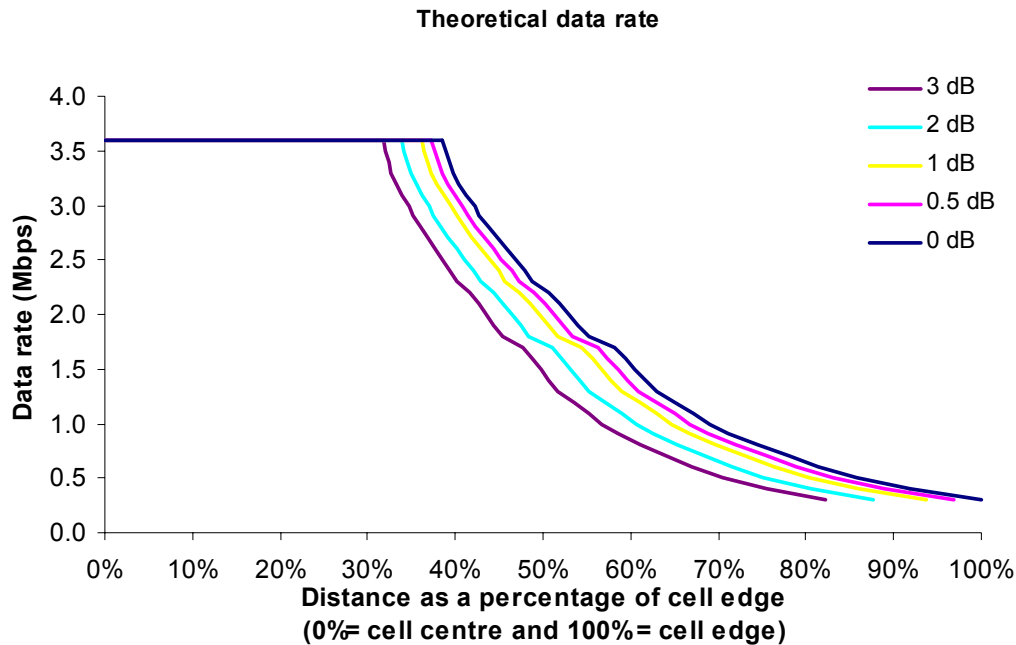


Figure 13.4 Theoretical maximum data rate as a function of distance from a typical UMTS Site offering HSDPA 3.6 Mbps⁴⁹ service.

153. Figure 13.4 above shows that, with zero performance degradation, end-users can enjoy a maximum speed on a typical UMTS Site offering HSDPA of 3.6 Mbps up to almost 39 per cent of the cell coverage range. The maximum speed then declines at a decreasing rate as the end-user moves further away from the transmission site. Crucially, Figure 13.4 also shows that end-users will experience reductions in the distance from the transmission site over which they can enjoy this maximum data rate as the level of performance degradation increases. Further, beyond certain distances, the maximum data rate end-users can enjoy at any given distance from the transmission site will be lower as the level of performance degradation increases. In this regard, data rate reductions due to link budget degradation are most evident near the cell edge or where the quality of the received signal is marginal.

154. The reductions in data rates for given levels of performance degradation are set out in Figure 13.5 below. Importantly, this shows that while a 0.5 dB degradation would reduce maximum data speeds at 39 per cent of the cell edge to roughly 3.3 Mbps (a decrease of roughly 8 per cent as compared to the zero degradation scenario), increasing the level of performance degradation to 1 dB would decrease maximum achievable data rates by roughly 11 per cent.

⁴⁹ HSDPA 7.2 Mbps and 14.4 Mbps services are planned for 2008 and 2009 respectively.

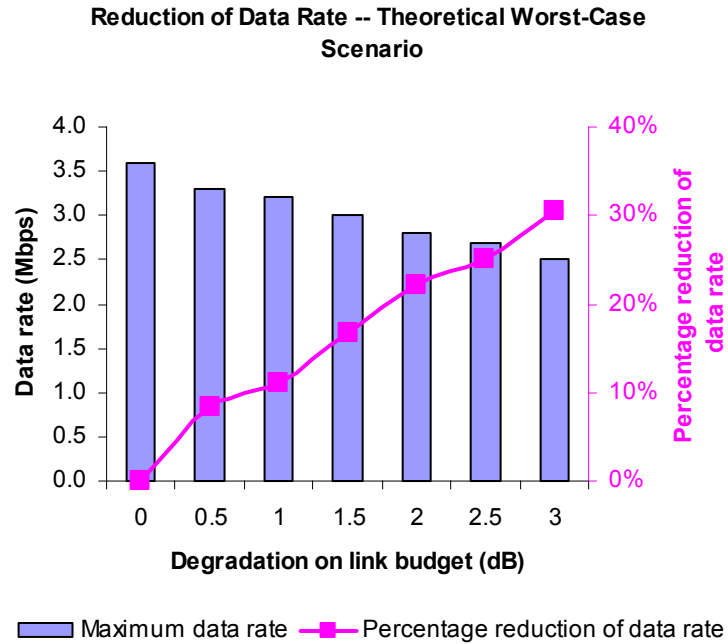


Figure 13.5 Reduction of data rate as a function of degradation on link budget for a typical UMTS Site offering HSDPA 3.6 Mbps service – theoretical worst-case scenario.

155. Overall, any level of performance degradation can generate significant damage to the experience enjoyed by end-users of mobile telecommunications services. Even at a level of performance degradation of 0.5 dB, Vodafone is concerned that there will be significant damage done to the quality of service it can provide to its end-users. For the reasons outlined in paragraph 143 above, however, it recognises that some minor level of performance degradation could be accepted. However, given there is not likely to be any readily available evidence to suggest the quantum of any off-setting consumer benefit that might arise from co-location on relevant facilities on a site-by-site basis, Vodafone believes the Commission should adopt an appropriate level of caution and not set a maximum level of acceptable performance degradation greater than 0.5 dB.

156. The levels of isolation and performance degradation referred to in paragraphs 143(a) and (b) are capable of measurement in dB and are intended to predict the likely detrimental impact on services to end users. The performance degradation referred to in paragraph 143(c) is not measurable in terms of dB. It is identifiable from customer complaints and network statistics on call failures, drop rates and the like. This will only be relevant where there is actual detrimental impact on end users. It is this impact which Vodafone has taken into account when ascertaining an acceptable

level of performance degradation, in order to protect its own end users and those of any existing co-locator at Relevant Facilities.

Co-location Design Principles

157. Vodafone notes that the TCF Interference Management and Design Working Group discussed circumstances in which an Access Seeker might request the Access Provider to move, add or change in some way the Access Provider's equipment prior to the provision of the Mobile Co-location Service. The circumstances when this might arise are when the Relevant Facilities cannot be used for the Mobile Co-location Service, even after investigating the possibility of the replacement, extension or revision of a Mast. Given that in this case there will be no other option for receiving the Mobile Co-location Service, Vodafone believes an Access Seeker should be able to request the Access Provider to move, add or change its equipment in order for the Mobile Co-location Service to be provided.

158. Given the potential detrimental effects on end-users arising out of any such change, however, the STP provides that the request will only proceed if it does not contravene the "Limits on access principles" listed under the Mobile Co-location Service in Part 3 of Schedule 1 of the Act. These include such things as a reduction of security or safety, compromises to health and safety and the interests of third parties. Further, the STP provides that any such request will not give rise to changes that will exceed the acceptable level of performance degradation set out in paragraph 143 above.

159. Vodafone believes that these measures are consistent with international best practice. In this regard, Vodafone is not aware of any regulator that mandates an Access Provider to move, add or change its equipment in order to accommodate an Access Seeker in ways that:

- a) contravene principles similar to the "Limits on access principles" listed under the Mobile Co-location Service in Part 3 of Schedule 1 of the Act; and/or
- b) would lead to unacceptable performance degradation in excess of that outlined in paragraph 143 above.

160. Vodafone believes this is appropriate. It is quite a serious matter to require an Access Provider to move, add or changes its equipment in order to accommodate another party. This is especially the case if such move, add or change has the

potential to generate degradation to network performance, and therefore the quality of service experienced by end-users.

161. This does not mean that co-location should not occur if the only way in which it can proceed is for an Access Provider to move, add or change its equipment. It is of course reasonable that consideration should be given to this when there are no other options available; where it does not compromise any of the limits on access principles; and where it might generate a net benefit to end-users. However, a blanket requirement on the Access Provider to move, add or change its equipment under any circumstances would not be in the best interests of end-users of mobile telecommunications services. Vodafone believes the limits to access principles contained in the Act – supplemented by the unacceptable performance degradation measures outlined in paragraph 143 above – provide an appropriate level of protection for end-users, and therefore should be included in the STD for the Mobile Co-location Service.

Access Provider Forecasting

162. Naturally, any existing transmission site will have a finite capacity with respect to the amount of equipment that can be placed upon it. It follows, therefore, that the amount of co-location that can occur on a given Relevant Facility may be limited by the space available at or on it.

163. To ensure co-location on cellular mobile transmission sites can occur in an equitable fashion, while still having regard to the additional “Limits on access principles” listed under the Mobile Co-location Service in Part 3 of Schedule 1 of the Act (which require the Commission to take into account “the access provider’s current and reasonable forecast requirements for capacity on the relevant facilities”), Vodafone has developed a particular forecasting and prioritisation process which is contained in the Mobile Co-location Operations Manual.

164. One of the issues that was discussed by the TCF and which has been addressed in the Interference Management and Design document, is what is a reasonable period for an Access Provider to reserve space on Relevant Facilities in order to meet its current and reasonable forecast requirements for capacity on the Relevant Facilities.

165. Vodafone’s experience in relation to the deployment of various mobile network types suggests a period of between five and six years is reasonable for a MNO to forecast the amount of capacity it will need on a given Relevant Facility. In this regard,

Vodafone notes that there will normally be a number of stages of network conception and development before a business will typically approve a decision to deploy an expansion, capability, technology, service or network. Vendor development associated with developing network specifications, hardware and software can typically take up to three years. Once an expansion, capability, technology, service or network has been conceived, the next stage in development will usually involve the approval of a business case to build it. Once approval has been granted, it can then take a number of years before full deployment. In Vodafone's experience, it is not unusual for the combination of conception and design; business case approval; and deployment to take between five and six years to complete.

166. For instance, Vodafone has been in discussions with potential vendors for a number of years in relation to the development of its long-term evolution (LTE) network, with the earliest commercial availability from vendors expected to range from the second half of 2009 to the first half of 2010. Vodafone has previously indicated in some media releases that it expects to launch this network in 2010-11.

167. Overall, therefore, Vodafone believes it is quite reasonable for a network operator to have network deployment plans in place for a number of years before actually installing all equipment, including on or with Relevant Facilities. Given the experience of some of Vodafone's previous network deployment plans, it is reasonable for an Access Provider to have forecast demands for capacity on Relevant Facilities for at least five-to-six years ahead of its actual full deployment on all transmission sites. Accordingly, Vodafone believes it is appropriate that the STP allow an Access Provider to cater for its current and reasonable forecast requirements for capacity on the Relevant Facilities for a maximum period of five years.

14. MOBILE CO-LOCATION IMPLEMENTATION PLAN

168. The Notice states that Vodafone's STP:

"must include terms for an 'Implementation Plan' to be followed by the access providers after the day on which the standard terms determination comes into force. This implementation plan must include, but is not limited to:

- i. a timeline for delivery of the Mobile Co-location Service to access seekers, including a list of all sites where the service could be implemented and the proposed delivery date (the day on which an access seeker can make a business as usual request for access to the Mobile Co-location Service under Section 30S of the Act) for the service at each site;
- ii. key performance indicators (KPIs);
- iii. a mechanism whereby the access provider is required to report to the Commission and access seekers on whether KPIs have been met;
- iv. incentives for compliance with KPIs;
- v. proposed remedial actions and outcomes where the access provider does not meet its KPIs; and
- vi. a soft launch, if necessary, of the Mobile Co-location Service prior to its full implementation."⁵⁰

General

169. The Mobile Co-location Implementation Plan includes terms to be followed by the Access Provider and the Access Seeker after the date on which the STD is determined by the Commission. The implementation consists of two phases, being an initial implementation phase of 40 Working Days, followed by a Soft Launch phase of 70 Working Days. After this phase, "business as usual" processes will apply.

170. The Implementation Plan includes:

- a) prerequisites for the Soft Launch and delivery of the Mobile Co-location Service;

⁵⁰ Paragraph 12(h), "Mobile Co-location Standard Terms Determination: Notice for Standard Terms Proposal" from Commerce Commission to Vodafone NZ Limited, dated 8 February 2008.

- b) provisions relating to the Soft Launch of the Mobile Co-location Service prior to its full implementation;
- c) timelines to enable the delivery of the Mobile Co-location Service to the Access Seeker;
- d) a description of how the Mobile Co-location Implementation Plan applies to new Access Providers;
- e) a description of how the prioritisation methodology in the Mobile Co-location Operations Manual applies during the Soft Launch;
- f) key performance indicators (**KPIs**), including proposed remedial actions and outcomes where the Access Provider does not meet its KPIs and a mechanism for the Access Provider to report to the Commission and Access Seekers; and
- g) a description of how the Mobile Co-location Service Level Terms apply during the implementation period.

Prerequisites

171. Before the Soft Launch can commence, and before the Access Seeker may submit a site data pack application to the Access Provider for delivery of the Mobile Co-location Service, the following prerequisites must be met:

- a) the Access Seeker may make a request in writing to the Access Provider for the Mobile Co-location Service pursuant to section 30S(1) of the Act (**Request**);
- b) the Access Seeker must have met the prerequisites set out in the Mobile Co-location General Terms and the Mobile Co-location Operations Manual;
- c) the Access Provider must have completed any enhancements necessary to its operational support systems (including the entry of data relating to the Charges), to enable it to provide the Mobile Co-location Service;
- d) the Access Provider must have completed the initial implementation phase; and
- e) the Access Seeker must have provided the Access Provider with the required Forecasts for the Mobile Co-location Service.

172. Vodafone believes these pre-requisites are appropriate because they are consistent

with those contained in the other documents which make up the Mobile Co-location General Terms and, from a technical and practical perspective, represent actions that will need to be completed prior to the commencement of the Soft Launch.

Soft Launch

173. The Mobile Co-location Implementation Plan sets out what Vodafone considers to be an appropriate Soft Launch for the Mobile Co-location Service. The terms include a timeframe and objectives of the Soft Launch.

174. The objective of the Soft Launch is to identify any faults in the Mobile Co-location Service, supporting systems or processes that may prevent the Access Seeker or the Access Provider from fully implementing the Mobile Co-location Service in accordance with the Mobile Co-location Terms by the end of the implementation period.

175. Any Access Seeker that has completed the necessary prerequisites may participate in the Soft Launch.

176. Vodafone has proposed that the Access Provider will process up to a maximum (inclusive) cumulative total of 30 site data pack applications that are received from all Access Seekers. Vodafone believes this number is appropriate because:

- a) it is in line with the maximum number of co-location applications that are to be processed by an Access Provider under the Code;
- b) it allows for a sufficient number of site data pack applications to allow for the Soft Launch to be meaningful; and
- c) the number is manageable given that the Access Seeker will have provided forecasts in relation to the site data pack application.

177. The Soft Launch will be completed within a period of 70 Working Days from the commencement of the Soft Launch period, and Vodafone believes that this timeframe should be long enough for the parties to carry out meaningful testing of the Mobile Co-location Service. Any lesser period would mean that only the early stages of the end-to-end process would be tested. While it would be possible to have a longer period for the Soft Launch, this would result in a delay to the full implementation of the Mobile Co-location Service. It is important to note that those applications which have begun to be processed during the Soft Launch period will continue to progress

through the end-to-end process after the completion of the Soft Launch.

178. Within 15 Working Days of completion of the Soft Launch, the Access Provider will provide a written report to the Commission setting out any material risks that may impact on the ongoing roll-out of Mobile Co-location Service, as identified in the Soft Launch.
179. Performance penalties in respect of the failure by the Access Provider to meet the service levels in the Mobile Co-location Service Level Terms will not apply in respect of the period prior to completion of the Soft Launch.
180. There onus will be on the Access Provider and the Access Seeker to co-operate to the best of their ability to ensure that the objectives of the Soft Launch are achieved by the Soft Launch completion date. Each party will provide reasonable assistance to the other to identify and fix faults as soon as practicable.
181. Neither the Access Provider nor the Access Seeker will be liable for any faults in the Mobile Co-location Service or supporting systems or processes that may delay full implementation of the Mobile Co-location Service.
182. The proposed date for completion of the implementation allows the Access Provider to analyse any learnings from the Soft Launch, report to the Commission, and undertake any work required to remedy any errors identified during the Soft Launch (provided that no material errors are identified).

Timeline

183. The Mobile Co-location Implementation Plan sets out the timeline for delivery of the Mobile Co-location Service. In line with the UCLL Co-location STD, the timeline begins after the date on which the Commission finally determines the terms in relation to the Mobile Co-location Service. The timeline for delivery of the Mobile Co-location Service throughout the implementation period will enable the Mobile Co-location Service to be provided in a timely manner. The timeline is made up of two parts:
- a) an initial implementation phase, triggered by the Access Provider receiving a Request from an Access Seeker; and
 - b) a Soft Launch, triggered by the Access Seeker providing initial forecasts to the Access Provider.

184. The timeline is based on a number of assumptions:

- a) that the Access Seeker will make a Request;
- b) that the Access Seeker will provide initial forecasts to the Access Provider;
- c) that the Access Seeker will make reasonable efforts to complete any action required of it in as timely a manner as possible in order to implement the Mobile Co-location Service and to carry out the Soft Launch; and
- d) that the Soft Launch period will become “business as usual” 70 Working Days after its commencement.

185. If any of the assumptions set out in the Mobile Co-location Implementation Plan are incorrect, then the time frame for delivery of the Mobile Co-location Service may be longer.

186. Set out below are the key time frames for delivery of the milestones included in the Mobile Co-location Implementation Plan:

Key time frames	Explanation
Initial implementation phase	
Request made by the Access Seeker Initial implementation phase day zero (R)	Access Provider receives its first Request from an Access Seeker. Implementation period commences. Initial implementation phase commences. Access Seeker may submit to the Access Provider an indicative forecast of locations of preferred Relevant Facilities.
R + 20 Working Days	Access Provider to take into account any forecasts that it receives by this date in developing its database.

	Access Provider to have completed any necessary enhancements to its operational support systems.
R + 25 Working Days	Access Provider to have produced a report to the Commission, copied to all Access Seekers that have made a Request, advising whether the Access Provider has implemented all necessary enhancements to its operational support systems.
R + 40 Working Days	Access Provider to have developed its database, in accordance with the Mobile Co-location Operations Manual. Initial implementation phase is complete.
Soft Launch	
Any date after the date on which the initial implementation phase completes, such date to be when the Access Provider has received from the Access Seeker the initial forecast. Soft Launch day zero (SL)	Soft Launch commences. Access Seeker to submit to the Access Provider a non-binding forecast of site data pack applications. Access Seeker to submit to the Access Provider a binding forecast of a list of up to 30 site data pack applications.
SL + 5 Working Days	Access Provider to provide to Access Seekers a list setting out a maximum of 30 site data pack applications, prioritised in accordance with the Mobile Co-location Operations Manual (Prioritised List).
SL + 10 Working Days	Access Seeker may submit to the Access Provider up to a maximum of 30 site data pack applications.

SL + 15 Working Days	Access Provider to have provided site data packs in response to a maximum of 30 site data pack applications which have been received from the total number of Access Seekers.
SL + 20 Working Days	Access Provider to have produced to the Access Seeker, and copied to the Commission, a report on the progress of site data pack applications.
SL + 20 Working Days until SL + 70 Working Days	<p>Access Provider to continue to process all applications received from the Access Seeker in accordance with the Prioritised List and the provisions (and timeframes) set out in the Mobile Co-location Operations Manual.</p> <p>Access Provider to populate its database, with data, in accordance with the Mobile Co-location Operations Manual.</p>
SL + 70 Working Days	<p>Soft Launch is complete.</p> <p>Access Seeker may submit site data pack applications in accordance with the Mobile Co-location Operations Manual under "business as usual" processes, for new site data pack applications. Those site data pack applications which are still in progress from the Soft Launch shall be processed in accordance with the Mobile Co-location Operations Manual.</p>
SL + 85 Working Days	Access Provider to have produced to the Access Seeker, and copied to the Commission, a report on the Soft Launch.

	Implementation period is complete
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Prioritisation of Relevant Facilities

187. The prioritisation of the Relevant Facilities during the implementation period will be undertaken in accordance with the prioritisation methodology set out in the Mobile Co-location Operations Manual.

Key performance indicators (KPIs)

188. The Mobile Co-location Implementation Plan includes the following KPIs for the implementation period:

- a) the Access Provider is to complete any enhancements to its operational support systems within 20 Working Days of the Request;
- b) the Access Provider is to populate its database with complete site data of a minimum of 200 Relevant Facilities (or all of its Relevant Facilities, if the Access Provider has less than 200 Relevant Facilities) within 40 Working Days of the Request;
- c) within 5 Working Days of the dates on which site data pack applications are received, the Access Provider is to issue up to a maximum (inclusive) cumulative total of 30 site data packs that have been received from all Access Seekers;
- d) for the site data packs that have been issued by the Access Provider, the Access Provider has processed such site data packs (and any applications subsequently made by the Access Seeker which relate to the initial site data packs) in accordance with the provisions and timeframes set out in the Mobile Co-location Operations Manual;
- e) the Access Provider is to populate its database, with data, in accordance with the Mobile Co-location Operations Manual; and
- f) the Access Provider has provided the reports referred to in the reporting section below.

189. The Soft Launch provides that the Access Provider is to populate its database with

complete site data of a minimum of 200 Relevant Facilities within 40 Working Days of a Request, and by the completion of the Soft Launch, is to populate further site data in accordance with the Mobile Co-location Operations Manual. In establishing these timeframes, Vodafone has taken into account the significant number of Relevant Facilities that will need to be included in the database, and the degree of detail which must be included for each Relevant Facility. Vodafone notes that during the TCF phase of the UCLL Co-location STD, Telecom provided comparable audit data for an initial batch of 20 sites, while under the terms of the UCLL Co-location STD, only 15 sites were made available for initial co-location.

Remedial actions and outcomes where the Access Provider does not meet its KPIs

190. Vodafone proposes that the following remedial actions and outcomes apply where the Access Provider does not meet its KPIs:

- a) if the Access Provider does not achieve any of the KPIs referred to above, it must put in place a plan to remedy the situation and will correct that situation as soon as is practicable in the circumstances. The Access Provider will provide the plan to the Commission and all Access Seekers that have made a Request. In the interim, the Access Provider will take reasonable remedial action; and
- b) where the Access Provider has not met one or more KPIs for the Mobile Co-location Service, and is requested to do so by the Commission, the Access Provider will provide fortnightly reports to the Commission setting out the reasons why it has not met the relevant KPIs for the Mobile Co-location Service in that quarter and the steps it intends to take to comply during the next quarter until the Access Provider is once again meeting its KPIs.

191. Vodafone believes that these requirements to report to the Commission will be an appropriate incentive on Access Providers to comply with the KPIs.

Mechanism for the Access Provider to report to the Commission and Access Seekers

192. Vodafone proposes that the Access Provider will submit the following written reports to the Commission and all Access Seekers that have made a Request, confirming compliance or otherwise of the KPIs set out in the section above:

- a) a report to be provided within 25 Working Days of the formal request pursuant to the Act, advising whether the Access Provider has implemented all necessary changes

to its operational and support systems;

- b) a report to be provided within 20 Working Days after the commencement of Soft Launch on the progress of site data pack applications during the Soft Launch; and
- c) a report to be provided within 15 Working Days following completion of the Soft Launch setting out the results of the Soft Launch and identifying any material risks that may impact on ongoing implementation of the Mobile Co-location Service.

Implementation of Service Level Terms

193. Vodafone proposes that the Mobile Co-location Service Level Terms will apply from the date that the STD has been determined by the Commission. However, the performance penalties will not apply in respect of the period prior to completion of the Soft Launch. Vodafone believes this is appropriate because the objective and purpose of a Soft Launch is to test the Mobile Co-location Service and to identify those elements which may cause issues for when the parties proceed to “business as usual”. Hence, it would be inappropriate to apply performance penalties during a period which is designed to tease out potential concerns in the provision of the Mobile Co-location Service.

Existing and new Access Providers

194. Every person that is an Access Provider of the Mobile Co-location Service on the date that the STD has been determined by the Commission shall be subject to the terms of the Mobile Co-location Implementation Plan from that date.

195. Vodafone proposes that every person that becomes an Access Provider of the Mobile Co-location Service on a date after the date that the STD has been determined by the Commission shall be subject to the terms of the Mobile Co-location Implementation Plan from the date that they become an Access Provider of the Mobile Co-location Service.

196. Vodafone proposes that the timeframes in the Mobile Co-location Implementation Plan shall apply to any person who becomes an Access Provider on a date which is after the date that the STD has been determined by the Commission as though references to that date are instead references to the date from which the new Access Provider qualifies as an Access Provider of the Mobile Co-location Service.

Time frames in which the Access Provider will make the Mobile Co-location Service available

197. Under section 30G(1)(C) of the Act, Vodafone's STP must state the time frames in which it will make the Mobile Co-location Service available to:

- (a) every person who is already an access seeker when the standard terms determination is made; and
- (b) every person who becomes an access seeker after the standard terms determination is made.

198. The time frame in which the Access Provider will make available the Mobile Co-location Service is calculated from the date the Access Seeker provides to the Access Provider a Request.

199. Vodafone has proposed a period of 40 Working Days for the initial implementation phase, commencing on the date the Access Seeker makes a Request. The Mobile Co-location Implementation Plan provides that if an Access Provider has elected to perform any or all of the actions prior to the date on which the STD is determined by the Commission, the timeline for the Soft Launch shall remain applicable.

200. Vodafone has proposed a period of 70 Working Days for the Soft Launch, which commences on the date the Access Seeker provides the initial forecast to the Access Provider. At the end of this period, the Mobile Co-location Service shall be provided and received under "business as usual" principles.

201. Appendix E of the Mobile Co-location Operations Manual sets out those tasks which must be completed by each party in order for the Mobile Co-location Service to be provided. Each task contains a target timeframe, based on the timeframes which Vodafone expects each party will need to undertake for each task. The estimated total timeframe set out in Appendix E for the completion of all tasks (from the Access Seeker's initial site application until the completion of the Access Seeker's build) for each Relevant Facility is 436 Working Days.

APPENDIX 1

GLOSSARY

ACCC Code	Means the Code approved by the Australian Competition and Consumer Commission titled "A Code of Access to Telecommunications Transmission Towers, Sites of Towers and Underground Facilities", dated October 1999.
Access Provider	Has the corresponding meaning within the Act
Access Seeker	Has the corresponding meaning within the Act
Act	Means the Telecommunications Act 2001, as amended
KPIs	Means the key performance indicators contained in the Mobile Co-location Implementation Plan
Mobile Co-location Access Terms	Means the Mobile Co-location Access Terms set out at Schedule 4 of the Mobile Co-location General Terms
Mobile Co-location General Terms	Means the Mobile Co-location General Terms contained in this STP
Mobile Co-location Implementation Plan	Means the Mobile Co-location Implementation Plan contained in the Mobile Co-location General Terms
Mobile Co-location Interference	Means the Mobile Co-location Interference

Management and Design document	Management and Design document set out at Schedule 5 of the Mobile Co-location General Terms
Mobile Co-location Service Description	Means the Mobile Co-location Service Description set out at Schedule 1 of the Mobile Co-location General Terms
Mobile Co-location Service Level Terms (or SLA)	Means the Mobile Co-location Service Level Terms set out at Schedule 2 of the Mobile Co-location General Terms
Mobile Co-location Operations Manual	Means the Mobile Co-location Operations Manual set out at Schedule 3 of the Mobile Co-location General Terms
Relevant Facilities	Has the meaning set out in clause 1 of the Mobile Co-location General Terms
Request	Where an Access Seeker has given written notice in accordance with section 30S(1)(a) of the Act that it requests that Access Provider to supply the Mobile Co-location Service on the terms specified in the STD
Soft Launch	Means the soft launch referred to in the Mobile Co-location Implementation Plan
TCF	Means the Telecommunications Carriers' Forum
Working Day	Means any other day other than a Saturday, Sunday or public holiday in any province relevant to the provision of the Mobile Co-location Service

APPENDIX 2

**Recommendations for Final Agreement at the Mobile Co-location Working Party
Meeting on 28 March 2008**

[Please see separate attachment]

